

A Preliminary Note on the Susceptibility of Goats to Malta Fever

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A Preliminary Note on the Susceptibility of Goats to Malta Fever.

By Dr. T. ZAMMIT, Member of the Mediterranean Fever Commission.

(Communicated by Colonel D. Bruce, C.B., F.R.S., R.A.M.C. Received July 25, 1905.)

Experiment 1.—White Goat. To note the effect of feeding goats on material containing *Micrococcus melitensis*—

1904, Sept. 15.—Examined blood for agglutination. Negative.

18.—Fed this goat, adding the contents of an agar tube culture of *M. melitensis*.

Dec. 3.—Blood has reacted in dilutions of 1 in 20 to 1 in 100, but the temperature curve shows no rise. Fed again in the same way.

23.—Blood reacts 1 in 300.

1905, Apr. 29.—Blood reacts 1 in 100. Goat still alive.

Experiment 2.—Red Goat—

1904, Dec. 3.—Blood reaction negative. Fed as in Experiment 1.

5.—Fed again.

15.—Blood reaction negative.

23.—Blood reacts 1 in 20; 1 in 50 after half an hour.

1905, Apr. 29.—Blood reacts 1 in 50.

These two experiments led me to the belief that goats are susceptible to Malta fever, and that the disease may be spread to human beings by goats.

Experiment 3.—Examination of the blood of goats suffering from naturally acquired Malta Fever by the agglutination test—

1905, June 14.—Examined the blood of six goats which were bought out of two different herds on the 12th inst.

Goat No. 1.—Strong immediate reaction, in dilution of 1 to 20.

Goat No. 2.—Strong immediate reaction, in dilution of 1 to 20.

Goat No. 3.—Strong reaction, after half an hour.

Goat No. 4.—No reaction.

Goat No. 5.—Strong reaction, after half an hour.

Goat No. 6.—Strong immediate reaction.

On June 15 the bloods were again examined, with identical results. On

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June 18 about 5 c.c. of blood was taken from Goat No. 6 and distributed in six broth-tubes. On June 25 passages from the broth-tubes were made on to agar slopes, and the *M. melitensis* recovered in pure culture. This micro-organism was also recovered from the blood of Goat No. 5. Blood was also taken from Goats Nos. 1, 2, and 3, but so far the *M. melitensis* has not been recovered.

Material from Abattoir.—Dr. Caruana Scicluna having suggested that possibly infected goats might be met with in the abattoir, I have examined 46 spleens, and have recovered the *M. melitensis* from one. The blood of seven of these goats gave a positive reaction to the agglutination test.

*Preliminary Note on Goats as a Means of Propagation of
Mediterranean Fever.*

By Major W. H. HORROCKS, R.A.M.C., Member of the Mediterranean
Fever Commission.

(Communicated by Colonel Bruce, C.B., F.R.S.—Received July, 1905.)

With the object of ascertaining, by experimental inoculation, whether goats could be infected by the *M. melitensis*, six goats were bought on June 12, 1905, from two different herds, and placed in the lazaretto. On June 14 Dr. Zammit, as a preliminary step to our experimental work, took blood from each of these goats, and proceeded to test the action of the serum on the *M. melitensis*. He found, to his great surprise, that the serum of five of the goats, when considerably diluted, caused agglutination of this microbe. On June 15 similar results being again obtained, Dr. Zammit brought specimens of the bloods to the Public Health Laboratory, and asked me to confirm his observations. I obtained the following results:—

Goat No. 1.—Blood serum diluted 1 to 10 and 1 to 40 caused immediate agglutination of the *M. melitensis*, visible to the naked eye. When diluted 1 to 100, however, the serum gave no reaction.

Goat No. 2.—Blood serum diluted 1 to 10 and 1 to 40 caused immediate agglutination of the *M. melitensis*. A dilution of 1 to 100 produced a complete reaction after 15 minutes.